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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/586,342

07/14/2006

Yasuhiko Okita

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20277 7590 03/24/2009  
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EXAMINER

ADDISU, SARA

ART UNIT

PAPER NUMBER

3724

MAIL DATE

DELIVERY MODE

03/24/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Notice of Allowability</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/586,342	OKITA ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	SARA ADDISU	3724	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 11/19/08.
2. ☒ The allowed claim(s) is/are 1-9.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☒ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
  - \* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.

**Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |  |  |
|--|--|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 5. <input type="checkbox"/> Notice of Informal Patent Application                      |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____. |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO/SB/08),<br>Paper No./Mail Date <u>10/7/08, 1/23/09</u> | 7. <input type="checkbox"/> Examiner's Amendment/Comment                               |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material                           | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance   |
|  | 9. <input type="checkbox"/> Other _____.   |

/Boyer D. Ashley/  
Supervisory Patent Examiner, Art Unit 3724

### **SUPPLEMENTAL ACTION**

(Please note: this supplemental action acknowledges the NPL of the IDS mailed 10/7/08).

#### ***Allowable Subject Matter***

Claims 1-9 are allowed.

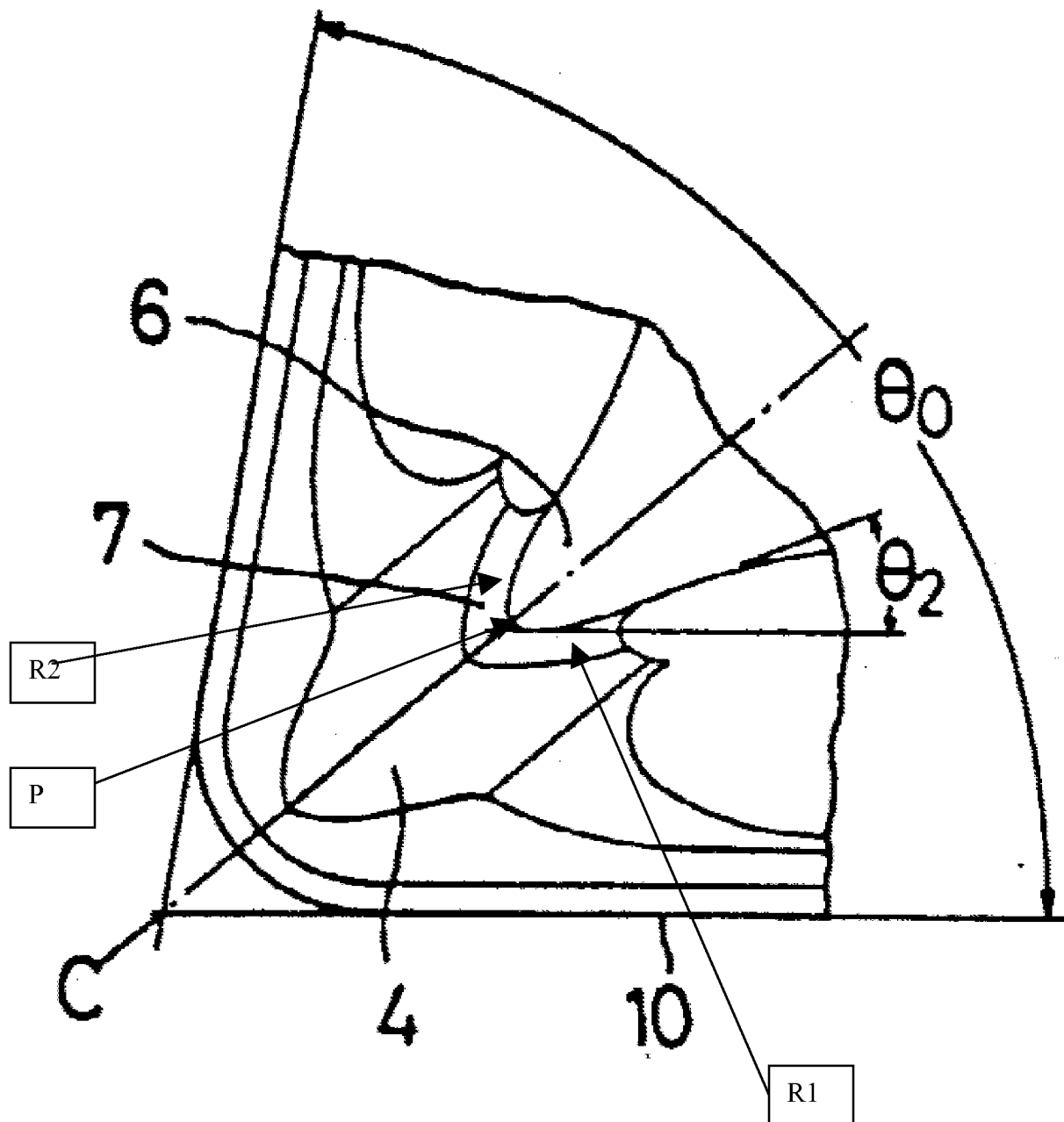
Regarding independent claim 1, the closest prior art to the instant invention is Takahashi (USP 5,044,839). TAKAHASHI teaches an insert having an upper surface with an apical angle part and having a polygonal shape in top view and forming an edge and a chip breaker (7), said chip breaker has a substantially symmetrical shape with respect to a section bisecting the apical angle of said apical angle part, and has a protrusion (6) and a flat part (3a: with shear angle of 0 degrees) provided between said protrusion and said apical angle part ('839, figures 1 and 11). TAKAHASHI also teaches a pair of arcuate ridges (R1 & R2: see figure below) on the apex of said protrusion (6) directed towards the nose of the insert. Please refer to attachment I submitted with the previous Office Action dated 2/14/08, page 10, for the detailed explanation of how TAKAHASHI reads on the angle (X) formed by the tangential line of the arcuate ridge at a point bisecting the arcuate ridge of the protrusion and a bisector of the apical angle. Please note: although TAKAHASHI does not disclose ridge length, distance and height difference of the forward end of said apical angle part and first intersection (P), whereby line segment ratio is

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between 0.2 and 0.8, it would have been obvious to one having ordinary skill in the art at the time the invention was made to vary ridge length (depending on the size of the insert), distance from the corner and the height of the chip breaker depending on the application of the tool and the thickness of the insert (as evidenced by De Beaupre et al., US Pub. No. 2003/0063955, paragraph 22, which states "The actual height of the chip breaker will depend on the overall size of the cutting insert and the intended application"), because it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art.

However, TAKAHASHI fails to anticipate or make obvious the insert being prepared by bonding a superhard sintered body (with a surface roughness of 0.1-0.5 $\mu$ m) containing cubic boron nitride to at least the upper surface of an apical angle part of the insert body. TAKAHASHI also fails to teach a chamfer/land being formed on the intersection between the upper surface and the side surface and said pair of ridges reaching said chamfer.

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***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sara Addisu at (571) 272-6082. The examiner can normally be reached on 8:30 am - 5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Boyer Ashley can be reached on (571) 272-4502. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Sara Addisu/  
Examiner, Art Unit 3724  
3/20/09  
/Boyer D. Ashley/

Supervisory Patent Examiner, Art Unit 3724